

REMARKS

Claims 1-24 are pending. In the above referenced Office Action, the pending claims have been rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement, under 35 U.S.C. 102(b) as being anticipated by Mehra (US 6,185,459) and/or under 35 U.S.C. 103(a) as being obvious over Mehra. In the previous response, Applicant articulated distinctions between the present claims and the reference cited thus indicating that the reference was insufficient to anticipate or render obvious the pending claims. The previous response is hereby incorporated herein by reference in its entirety. The Examiner has replied by indicating that the reference "inherently" teaches what is claimed. Applicant respectfully traverses.

Rejections under 35 U.S.C. 112

Claims 1, 12, 23 and 24 stand rejected under 35 U.S.C. 112, first paragraph. Claim 1 is directed to "an implantable medical device, comprising ...means for detecting whether there is an a sudden increase in the frequency of first events of the plurality of events corresponding to onset of a second event of the plurality of sensed events...means for adjusting parameters associated with delivery of a therapy in response to the detected sudden increased frequency of first sensed events; and means for delivering the therapy using the adjusted parameters, wherein the sudden increase in frequency of first events corresponds to an increase in frequency detected over a time period of up to approximately one minute."

In paragraph 5 of the originally filed specification, the Applicant explains an "atrial tachyarrhythmia occurs when a trigger, such as a sudden change in the electrophysiological, autonomic, ischemic or mechanical state of the atrium, occurs in a substrate capable of sustaining the arrhythmia." In paragraph 6, the applicant indicates that "the inventors have found that initiation of atrial tachyarrhythmias is often preceded by a burst of shortly coupled premature beats" and further states "for example the frequency of these PACs may increase from 0.8 PACs per minute to 6.2 PACs per minute in thirty seconds prior to AF."

Example embodiments of a detected frequency of PACs being indicative of an atrial tachyarrhythmia have been set forth numerous times in the written description as: three in thirty seconds (e.g., in paragraph 41) and five in forty-five seconds (e.g. in paragraph 42). As such, applicant respectfully asserts that "a sudden increase in the frequency of first events corresponding to onset of a second event...wherein the sudden increase in frequency of first events corresponds to an increase in frequency detected over a time period of up to approximately one minute" is clearly specified in the originally-filed written description and would be clearly understood by one having skill in the art. No examples of a frequency of PACs occurring over hours, days, or weeks, as suggested by the Examiner as trends that could be considered "sudden", are discussed or suggested by the Applicant as being the type of "sudden change" that is indicative of the onset of AF. The claim language must be given a proper meaning in the context of the claim and in the context of the specification. Given the specific examples of PAC frequency cited throughout the written description, all of which refer to a time interval of approximately one minute or less, Applicant respectfully submits that the 112 rejection is improper and should be withdrawn.

Rejections under 35 U.S.C. 102(b) and 103(a)

Mehra discloses a pacemaker for monitoring a count of tachyarrhythmia occurrences over an extended time period during delivery of a tachyarrhythmia prevention pacing mode to determine the success of the tachyarrhythmia prevention pacing mode. Mehra specifies the extended time period as "preferably at least several days and more preferably at least several weeks" (col. 13, lines 14-16). One metric of success is listed as mean PACs per day (col. 21, line 58), however, Mehra is clearly monitoring the occurrence of mean PACs per day over an extended time period to measure the success of a delivered prevention pacing mode. Mehra makes no suggestion whatsoever, either expressly or implied, of detecting a sudden increase in the frequency of first events corresponding to onset of a second event and responding to the

detected sudden increased frequency, wherein the sudden increase in frequency is detected over a time period of up to approximately one minute.

The Examiner states that Mehra "inherently detects changes on a beat-to-beat basis, which qualifies as a sudden increase" and "inherently detects increases over a period of up to approximately one minute since the Mehra device can detect increases of periods longer than that." Applicant respectfully traverses. At Col. 13, lines 14 through 18, the Mehra device checks if the extended time period timer has expired and if so the timer is reset. As such, Mehra teaches a timer set to an extended time period. Mehra does not teach or suggest a device including a timer set for a period of up to approximately one minute. Since the timer taught by Mehra is configured to function as an extended time period timer, corresponding to days or several weeks, the Mehra device is not inherently capable of detecting increases over a period of up to approximately one minute as suggested by the Examiner.

The Mehra reference lacks any suggestion, express or implied, for modifying the function of the disclosed device to include a timer corresponding to a period of up to approximately one minute. As such, the reference fails to render the pending claims obvious to a skilled artisan. Applicant respectfully asserts the rejection is improper and should be withdrawn.

Accordingly, Applicant respectfully asserts that the present claims are in condition for allowance. Withdrawal of the instant rejections and issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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Date

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